

## REMARKS

Claims 1-24 are pending in the application. The Applicants hereby request further examination and reconsideration of the application in view of these remarks.

### Summary of Rejections:

Claims 1-3, 5-13, 15-22, and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Moeller'022 (U.S. Patent Application Publication No. 2003/0170022). Claims 4, 14, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Moeller'022 in view of Yonenaga. Claims 1, 3-11, 13-21, and 23 are also provisionally rejected on the ground of obviousness-type double patenting over claims 1, 3-4, 6-7, 11, 13-14, 21, and 23 of co-pending Application No. 10/782,231.

### Request to Remove Finality:

In paragraph 4 of the non-final office action of 07/27/2007, in which Moeller'022 was first cited, the Examiner stated that Moeller'022 "constitutes prior art only under 35 U.S.C. 102(e)" (emphasis added). The Examiner then suggested three options for overcoming, on procedural grounds, the claim rejections under 35 U.S.C. § 103(a) over Moeller'022. More specifically, the suggested options were: (1) a declaration under 37 CFR 1.132; (2) a declaration under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130. In response to that non-final office action, the Applicants filed a declaration under 37 CFR 1.132, i.e., used option (1). The Applicants' declaration was consequently ruled insufficient and the rejection was made final.

The Applicants submit that the above-cited Examiner's statement is inaccurate because, in addition to constituting prior art under 35 U.S.C. 102(e), Moeller'022 also constitutes prior art under 35 U.S.C. 102(a). As a result, none of the options suggested by the Examiner would have been effective in overcoming the rejections on procedural grounds. The Applicants request that the finality of the office action dated 04/24/2008 be withdrawn to afford the Applicants an opportunity to present substantive arguments because the above-identified inaccuracy in the characterization of the grounds of rejection over Moeller'022 misled the Applicants in the preparation of their response.

### Substantive Arguments:

Claim 1 is directed to a method of signal processing and recites, inter alia, that the sampling-window width is selected to reduce contribution of the second plurality of waveforms into integration results corresponding to the first plurality of waveforms.

On page 6 of the office action of 04/24/2008, the Examiner admitted that Moeller'022 does not expressly disclose this limitation. However, the Examiner proceeded to state that "such a selection of sampling window width is intuitively obvious." The Examiner then provided the following rationale for this conclusion:

One of ordinary skill in the art would have been motivated to do this in view of an obviously undesirable counterexample. That is, consider the option of a sampling window that is as wide as the bit slot. With such a wide sampling window, the "1" waveforms of pulses with timing jitter from adjacent bit slots can adversely contribute to the integration results corresponding to "0" waveforms. This contribution can lead to inaccurate sampling results. Accordingly, it follows that one would be motivated to select a sampling window width to reduce this contribution.

First of all, the Applicants submit that the Examiner has substantially borrowed, for the above-cited rationale, a description of the advantages of the invention contained in Applicants' own specification (see, e.g., page 6, lines 6-23). However, such borrowing is not permitted because it constitutes an improper use of hindsight. If the prior art does not contain even a suggestion of the specific modifications that are needed to be made to the teachings of the prior art to yield the claimed invention, then a rejection on the grounds of obviousness based solely on the advantages provided by that claimed invention is an improper use of hindsight. See, e.g., In re Fritch, 972, F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992) ("[I]t is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious . . . This court has previously stated that '[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.'"); In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) ("As in all determinations under 35 U.S.C. section 103, the decisionmaker must bring judgment to bear. It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps.").

Second, the Applicants note that the Examiner's rationale is improperly biased and utterly incomplete because it only considers the possible benefits of using a relatively narrow sampling window while completely ignoring the possible detriments of such use. In particular, as explained at page 5 of Applicants' specification, a relatively wide sampling window and the corresponding relatively long integration time produce noise averaging, which is beneficial because it might lead to fewer decoding errors. The flip side of this observation is that a relatively narrow sampling window and the corresponding relatively short integration time can be detrimental because they reduce the benefits of noise averaging. It is submitted that one of ordinary skill in the art would certainly recognize and consider these detriments. With the recognition of both the benefits and the detriments of using a relatively narrow sampling window, it would not at all be obvious to one of ordinary skill in the art that the benefits would outweigh the detriments, notwithstanding the Examiner's assertion to the contrary.

Third, it appears that the Examiner's rationale can best be categorized as an "obvious to try" rationale (see MPEP § 2143). If the Examiner had a different category in mind, then the Applicants request clarification and an explanation of where, in the Examiner's view, her rationale stands within the framework of MPEP § 2143. Assuming that the Examiner's rationale falls into the "obvious to try" category, the Applicants then point out that this category requires "a finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success" (see MPEP § 2143(E)(3)). However, it is submitted that such a finding had not been made and, in fact, could not have been made in the rejection. In particular, the Applicants direct the Examiner's attention to the fact that it took a considerable effort in the form of experiments and numerical simulations, the results of some of which are presented in Applicants' Figs. 6-8, to come to a conclusion that, if the waveforms representing optical "ones" contribute into integration results corresponding to the waveforms representing optical "zeros," then selecting a sampling-window width that reduces said contribution is in fact beneficial. The sheer amount of this effort strongly supports a finding that one of ordinary skill in the art could not have had the requisite "reasonable expectation of success" based solely on the recognition of the problem illustrated by the Examiner's "obviously undesirable counterexample."

For all these reasons, the Applicants submit that claim 1 is non-obvious and allowable over Moeller'022. For similar reasons, the Applicants submit that each of claims 1, 11, 21, and 24 is also

non-obvious and allowable over Moeller'022. Since the rest of the claims depend variously from claims 1, 11, and 21, it is further submitted that those claims are also allowable over Moeller'022. The Applicant submits therefore that the rejections of claims under § 103 have been overcome.

Claim 3, which depends from claim 1, further specifies that the width of the sampling window is selected based on an eye diagram of the optical signal. Claim 13, which depends from claim 11, recites a similar limitation.

On page 7 of the office action of 04/24/2008, in the rejection of claims 3 and 13, the Examiner stated that:

[With] regard to claims 3 and 13, in that the sampling window would be a function of the eye opening in order to provide the highest quality signal, it would have been obvious to use the eye diagram in order to select a sampling window width.

The Applicants submit that this statement amounts to a naked declaration of obviousness that does not conform to the Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 contained in MPEP § 2141. In particular, the rejection of claims 3 and 13 fails to follow the basic factual inquiries specified in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966). As such, this rejection is improper and should be withdrawn.

The Applicants submit that each of claims 3 and 13 is allowable over the cited references because none of the cited references teaches or even reasonably suggests the corresponding limitation. All these facts provide additional reasons for the allowability of claims 3 and 13 over the cited references.

#### Double-Patenting Rejection:

In paragraph 7 of the office action of 04/24/2008, the Examiner accepted the previously submitted arguments with regard to the double-patenting rejection and stated that the double-patenting rejection will be withdrawn when the substantive rejections are overcome. The Applicants submit that the double-patenting rejection should now be withdrawn because the rejections of claims under § 103 have been overcome.

In view of the above remarks, the Applicant believes that all pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

Date: 06/18/2008  
Customer No. 46850  
Mendelsohn & Associates, P.C.  
1500 John F. Kennedy Blvd., Suite 405  
Philadelphia, Pennsylvania 19102

/Yuri Gruzdkov/  
Yuri Gruzdkov  
Registration No. 50,762  
Attorney for Applicant  
(215) 557-8544 (phone)  
(215) 557-8477 (fax)